



Docket No.: 614.1948

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Takashi SHINZAKI et al.

Serial No. 09/271,249

Group Art Unit: 2132

Confirmation No. 3857

Filed: March 17, 1999

Examiner: Grigory Gurshman

For: AUTHENTICATION APPARATUS AND COMPUTER-READABLE STORAGE MEDIUM

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Technology Center 2100

**RESPONSE TO FINAL REJECTION UNDER 37 CFR 1.116**

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Sir:

Applicants hereby respond to the FINAL rejection mailed March 3, 2004 and setting three month response period expiring June 3, 2004. This response is filed with a Petition for a Two Month Extension of Time in accordance with which it is time filed as of the current date of August 3, 2004.

**FINAL REJECTION SHOULD BE WITHDRAWN SINCE DEFECTIVE AND PREMATURE:  
MPEP 707.07**

It is respectfully submitted that the Final rejection is defective, since failing to provide applicant "a full and fair hearing..." and to develop "a clear issue between applicant and Examiner...." (MPEP 706.07 and 37 CFR 1.113) Further, the Examiner, in the FINAL Office Action, has failed to "answer all material traversed" as required by MPEP 707.07(f).

In item 3 at pages 2-4 of the FINAL Office Action, the Examiner dismisses applicants' contentions in the intervening response that the claims were inappropriately grouped in the first Office Action, asserting merely that a "broad but reasonable interpretation of the claims" was applied. No explanation of what constitutes a "broad but reasonable interpretation of the claims" is provided--and as shown below, the Examiner's grounds for rejection of the claims, now repeated in the FINAL Office Action, are inconsistent with the actual recitations of the claims.

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Reconsideration is respectfully requested.

Enclosed as an attachment is a Table, listing the independent claims and designating the respective functions of the successive paragraphs of each claim by letter abbreviations, as follows:

M = measuring

C = converting

E = extracting

R = registering

V = verifying

V' = verifying (modified in that no extraction is involved)

CMP = comparing

As can be seen from the Table, the various independent claims have different respective sequences and combinations of the above functions, which can be grouped into four different categories, designated by respective reference numerals I through IV, as follows:

		<u>Function Sequence</u>
Cat. I:	Claims 1, 19, and 27	M C E V
Cat. II:	Claims 9, 22, and 28	M E C V
Cat. III:	Claims 17, 18, 25, 26, and 31	M C R V'
Cat. IV:	Claims 29 and 30	M C E CMP

As shown in the following analyses of the first Office Action of October 2, 2003 and the second, final Office Action of March 3, 2004 (see, Table), the Examiner has ignored the opposite sequences of "converting" (C) and "extracting" (E) functions of the Category II claims, relative to the Category I, III and IV claims, and ignored as well the total absence of the "extracting" function in the Category III claims--which, instead, include a "registering" function--which, on the other hand, is not present in claims 1, 9, and 14.

As a result, the Examiner's rejections lack logical analysis and are self-apparently defective.

**I. FIRST OFFICE ACTION MAILED OCTOBER 2, 2003**

**A. Item 3: Rejection of Claims 1, 9, 14, and 18 on Kanevsky and Strait in Item 3 at Pages 2-3 of the Non-Final Action mailed October 2, 2003**

Therein, the Examiner rejected the group of claims 1, 9, 14, and 18 as reading on Kanevsky, consistent with the sequence of the first three paragraph recitations of claim 1:

- 1: (M) measuring biometric information...;
- 2: (C) converting...the biometric information; and
- 3: (E) extracting feature information from the converted biometric information....

Note that the "verifying..." (V) fourth paragraph of claim 1 is not purported to be readable on Kanevsky. Indeed, at page 3, the Examiner expressly concedes that Kanevsky "does not explicitly teach verifying the extracted feature converted biometric information by comparing it against the extracted feature converted biometric information previously obtained"--and thus relies on Strait for that alleged teaching.

In reading claim 1 on Kanevsky, the Examiner necessarily contends that Kanevsky teaches the above sequence of functions M,C,E which appear in claim 1 and, particularly, that "converting..." (C) precedes "extracting..." (E).

However, in claims 9 and claim 14 (which in turn depends through claim 13/9 from claim 9), in claim 9, "extracting..." (E) precedes "converting..." (C)--i.e., the opposite sequence to that of claim 1.

By contrast to the defective, common grouping of claims 1 and 9 in the Office Action, in the Table, claim 1 is placed in Group I and claim 9 is placed in Group II.

On the other hand, claim 18 does not include an "extracting..." function and instead recites the verifying function V'--which, as noted above, is modified from the verifying function V in that no extraction (E) is involved. On the other hand, claim 18 includes a registering (R) function. As specified above, claims 17, 18, 25, 26, and 31 of Category III all include the common sequence of recitations MERV. It follows that the rejection of claim 18 on Kanevsky and Strait is altogether misplaced.

Not only is the grouping of claims in item 3 of the Action illogical, it is apparent that the rejections of those claims are without basis. As to claim 1, Kanevsky does not teach "verifying" (V) and, as to claim 9, Kanevsky is not even advanced by the Action as teaching the sequence of "extracting" (E) preceding "converting" (C)--which is the opposite sequence to that recited in

claim 1--and the Action fails altogether to address the actual recitations of claim 18.

In relying on grounds of obviousness, the initial and FINAL Office Actions, moreover, are altogether deficient since failing to comply with MPEP 2144.03 with regard to the Examiner's admitted reliance on "common knowledge", unsupported by any documentary evidence, not only as to the alleged obviousness of combining Kanevsky with each of Strait and Priddy but also in the Examiner's advancing definitions of claim terms on the purported ground they are "well known in the art...."

The Federal Circuit has rejected reliance on "basic knowledge" or "common sense" as affording "no evidentiary support", *In re Zurko*, 258 F3d 1379, 59 USPQ2d 1693 (Fed. Cir. 2001), and which has been rigorously endorsed by the PTO in accordance with the Memorandum of Stephen G. Kunin of February 21, 2002: "Procedures For Relying On Facts Which Are Not Of Record As Common Knowledge Or For Taking Official Action." (Hereinafter, "Kunin Memorandum", copy enclosed) The "lack of substantial evidence" is evident in the Action (see Kunin Memorandum, page 1).

Clearly, the Examiner is merely advancing unsupported contentions based on presumably "common sense" and without evidentiary support to propose the combinations relied upon and the Kunin Memorandum unqualifiedly rejects same as inadequate.

**B. ITEM 6 AT PAGE 4: REJECTION OF CLAIMS 5, 6, 13-16, 19-24, 26-30 ON KANEVSKY**

As shown in the Table, the claims commonly rejected in item 6 fall, variously, into all of the I-IV categories. Necessarily, the common rejection of these claims have divergent recitations is confused and misplaced and should be withdrawn.

**C. REJECTION OF CLAIMS 17, 25, AND 31-33 UNDER 35 USC § 103 (AS CORRECTED) ON PRIDDY IN VIEW OF STRAIT, PAGES 4-6 OF THE OCTOBER 2, 2003 ACTION**

As seen from the Table, claims 17, 18, 25 and 31-33 are commonly in Category III--whereas the Examiner's Group is incomplete, since missing claim 18--which, instead, is improperly included in the group of claims 1, 9, 14, and 18 of the rejection at pages 2-3 of the Action.

As before noted, Group III does not include recitations as to extracting features. At page 5 of the prior Action, nevertheless, the Examiner addresses this group of claims as though they included the "extracting..." feature, conceding that Priddy does not "explicitly teach verifying the

extracted feature converted biometric information...." Accordingly, the Examiner relies on Strait for teaching: "recording (i.e., extracting) the original biometric information and convolving (i.e., converting) the biometric measurements (i.e., extracted feature..." and then verifying same. (Emphasis added)

None of the involved, rejected claims recites extracting, as above noted, and hence the rejections of the Group III claims 17, 25, and 31-33 are without basis.

#### **D. CONCLUSION**

Accordingly, applicants' contention in the intervening response that the Examiner's groupings of claims in the first Office Action was inappropriate is correct and thus the Examiner errs in contending in item 3 of the current, FINAL Action, that the groupings were proper.

#### **II. THE CURRENT, FINAL OFFICE ACTION MAILED MARCH 3, 2004**

##### **ITEM 3: EXAMINER'S RESPONSE TO ARGUMENT THAT THE EXAMINER'S GROUPINGS OF CLAIMS IN FIRST OFFICE ACTION ARE INAPPROPRIATE**

Item 3 asserts:

Examiner contends that broad but reasonable interpretation of the claims has been applied and claims have been grouped according to their scope and subject matter. Therefore, grounds of rejection based on grouping of the claims are valid.

(Final Office Action, item 3 at page 2)

The Examiner fails to support this contention with any documentary or other evidence--and the contention is clearly at odds with the facts shown by the foregoing analysis. Moreover, the Examiner has failed to address the specific arguments set forth in the intervening response explaining the Examiner's improper grouping of claims. For these reasons, alone, the Action is prematurely made final and which should be withdrawn. (MPEP 706.07(c))

##### **ITEM 4: INDEPENDENT CLAIMS 1, 19, 27 AND 29**

The Examiner continues to group together Category I claims 1, 19, and 27 with Category IV claim 29. Category IV differs from Category I in reciting a comparing function and not a verifying function. Hence, the rejections applicable to the Category I claims are not applicable to

the Category IV claim 29. Furthermore, the grouping additionally is in error since omitting claim 30 of Category IV, which likewise recites the comparing function rather than verifying.

**ITEM 6: REJECTION OF CLAIMS 9, 22, 28, AND 30 BASED ON KANEVSKY AND STRAIT--ALSO RELIED UPON TO MAINTAIN THE REJECTION OF CLAIMS 1, 19, 27, 29**

From the Table, this rejection combines Category II claims 9, 22, and 28 with the Category IV claim 30. Category II performs "verifying" whereas Category IV performs "comparing"--a difference which the Action ignores.

The paragraph 6 grouping of claims, moreover, relies on the identical prior art combination as in the case in the paragraph 4 rejection of Category I claims--even though the Category II claims 9, 2, and 28 have the reverse sequence of the "extraction" and "conversion" functions, relative to the sequences of the Category I claims, and, on the other hand, the Category IV claim 30 recites a comparison function rather than a verification function.

**ITEM 5: EXAMINER'S RESPONSE TO APPLICANTS' ARGUMENT AS TO MEANINGS OF TERMS**

Herein, the Examiner asserts:

Referring to Applicant's argument as for meanings of the terms, Examiner points out that the terms in question are well known in the art and equating, for example, the term "convolving the biometric measurements" with the term "converting" is appropriate using the broad interpretation of the claim language.

Applicants demonstrated in the prior response, supported by dictionary definitions of Exhibits A and B, that the Examiner is misusing terms, contrary to the ordinary meanings of same, in equating "extracting" and "converting" of applicants' claims as purportedly being the equivalent of "recording" and "convolving" of the Strait claims.

Applicants continue to assert that the Examiner altogether distorts the meanings of the Strait terms "recording" and "convolving", when interpreting these terms respectively to mean --extracting-- and --converting-- as recited in applicants' claims, contrary to common dictionary definitions of those terms, as addressed in the prior response.

Applicants have shown in the foregoing that the Examiner has not given the claims their "normal and ordinary meanings", contrary to well established precedent. This is well evidenced

by the dictionary definitions filed as Exhibits A and B with the intervening response.

Again the Action is premature for this reason, alone, and should be withdrawn. MPEP 706.07(c)

There was no support for the Examiner's equating these terms in the initial Action and none is advanced in the FINAL Office Action. Strait accordingly stands as being misapplied and the same should be withdrawn as a reference.

#### The Current Action Confuses The Requirement To Prove "Motivation"

The Examiner confuses the requirement to prove "motivation" which, as relevant to the prior response, involves what motivation existed to render obvious the combination of Kanevsky and Strait.

Instead, the current Action addresses a very different aspect of motivation, in the sentence spanning pages 2-3 of the current Action:

Examiner maintains that one of ordinary skill in the art would have been motivated to verify the extracted feature converted biometric information by comparing it against the extracted feature converted biometric information previously obtained as taught in Strait for securing a cryptographic system based on biometric measurements (see Strait, column 2, lines 60-65).

In short, the "motivation" the Examiner addresses in the above quoted statement is that of performing "verifying" by the recited "comparing" function. The Examiner, in this instance, appears to be arguing that one of skill in the art would have deemed it obvious to perform "verifying" by "comparing"--i.e., the Examiner uses "motivation" as synonymous with "would have been obvious to one of skill in the art"--.

The Examiner furthermore asserts in the present Action at page 3:

Examiner points out that the motivation to combine the teachings of Kanevsky and Strait is explicitly provided in Strait (column 2, lines 60-65).

To the contrary, Col. 2, lines 60-65 of Strait is silent as to any such "motivation to combine...", merely stating:

A further advantage of the present invention is that a method and system are provided for securing a cryptographic system based on biometric measurements.

This statement at col. 2, lines 60-65 of Strait addresses solely the objectives of Strait and suggests no need for supplementing Strait's own disclosure, much less combining the a separate teaching of Kanevsky with the system disclosed by Strait.

#### **ITEMS 10-15, PAGES 5-7**

These pages simply repeat, verbatim the content of items 4/7 through 8 at pages 4-5 of the prior final Office Action.

Applicants respond by incorporating by reference herein the intervening response.

#### **CONCLUSION**

The Examiner's groupings of the claims is incorrect, since claims having different constituent elements are placed in a common group and different claims having the same constituent elements are placed in different groups--and the Examiner then rejects these incorrectly grouped claims on common grounds, which simply do not comply with the claim limitations.

The Examiner's rationale in defense of the groupings is based on an unsubstantiated and clearly erroneous contention that the claims have been "grouped according to their scope and subject matter"--which the attached Table demonstrates is indisputably incorrect.

The Examiner's response that the meanings of terms, crafted by the Examiner, are well known in the art..." fails to comply with the standard that with the standard set for same, that they be "capable of instant and unquestionable demonstration as being well-known." (MPEP 2144.03) Applicants have advanced dictionary definitions to contradict the Examiner's unsubstantiated and unsupported meanings for the terms of Strait, which the Examiner has failed to address, as likewise the Examiner has failed to address applicants' prior contentions as to proper groupings of the claims. These factors render the present Final rejection premature and applicants request, accordingly, that the finality thereof be withdrawn. MPEP 706.07(c)

It is respectfully submitted that the grounds of rejection are altogether defective and that the same should be withdrawn. There being no other objections or rejections, it is submitted that the application is in condition for allowance, which action is earnestly solicited.



If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

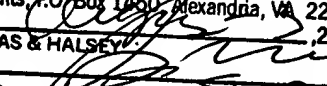
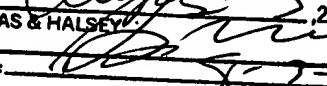
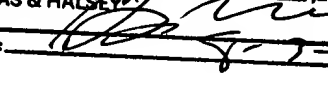
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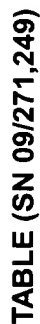
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STAAS & HALSEY  
By:   
Date: 



## Applicants' Claim Groups I to IV

Claim:	1	9	17	18	19	22	25	26	27	28	29	30	31
¶ 1	M	M	M	M	M	M	M	M	M	M	M	M	M
¶ 2	C <sub>NV</sub>	E <sub>X</sub>	C <sub>NV</sub>	C <sub>NV</sub>	C <sub>NV</sub>	E <sub>X</sub>	C <sub>NC</sub>	C <sub>NN</sub>	C <sub>NV</sub>	E <sub>X</sub>	C <sub>NV</sub>	E <sub>X</sub>	C <sub>NV</sub>
¶ 3	E <sub>X</sub>	C <sub>NV</sub>	R	R	E <sub>X</sub>	C <sub>NV</sub>	R	R	E <sub>1</sub>	C <sub>NV</sub>	E <sub>X</sub>	C <sub>NV</sub>	R
¶ 4	V	V	V'	V'	V	V	V'	V'	V	V	CMP	CMP	V'
October 2, 2003													
¶ 3	✓	✓	III	✓	I	II	III	III	I	II	IV	IV	III
¶ 6	✓	✓			✓	✓		✓	✓	✓	✓	✓	
5,6		13-16			(19---24)	---		(26---	---	---	---	30)	
¶ 7			✓				✓						✓ (31-33)
March 3, 2004 FINAL Office Action													
¶ 4	✓				✓				✓		✓		
¶ 6		✓				✓				✓		✓	
¶ 7			✓				✓						✓ (31-33)



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENT  
UNITED STATES PATENT AND TRADEMARK OFFICE  
WASHINGTON, D.C. 2023  
www.uspto.gov

Date: February 21, 2002

To: Patent Examining Corps  
Technology Center Directors

From: Stephen G. Kunin  
Deputy Commissioner for Patent Examination Policy

Subject: Procedures for Relying on Facts Which are Not of Record as  
Common Knowledge or for Taking Official Notice

This memorandum clarifies the circumstances in which it is appropriate to take official notice of facts not in the record or to rely on "common knowledge" in making a rejection.

Recent court decisions have affected the Office's practice of taking official notice of facts by relying on common knowledge in the art without a reference. Specifically, the Supreme Court recently changed the standard of review applied to decisions of the Board of Patent Appeals and Interferences and the Trademark Trial and Appeal Board on appeal to the U.S. Court of Appeals for the Federal Circuit. *Dickinson v. Zurko*, 527 U.S. 150, 50 USPQ2d 1930 (1999). As a result, the Federal Circuit now reviews findings of fact under the "substantial evidence" standard under the Administrative Procedure Act (APA), rather than the former "clearly erroneous" standard. *In re Gartside*, 203 F.3d 1305, 1315, 53 USPQ2d 1769, 1775 (Fed. Cir. 2000).<sup>1</sup> This change in the review standard has affected the Federal Circuit's view of when the court or the USPTO may take notice of facts without specific documentary evidence support.<sup>2</sup>

On remand from the Supreme Court, the Federal Circuit in *In re Zurko*, 258 F.3d 1379, 59 USPQ2d 1693 (Fed. Cir. 2001), reversed the Board's decision upholding a rejection under 35 U.S.C. 103 for lack of substantial evidence. Specifically, in *Zurko* and other recent decisions, the court criticized the USPTO's reliance on "basic knowledge" or "common sense" to support an obviousness rejection, where there was no evidentiary support in the record for such a finding.<sup>3</sup> In light of the recent Federal Circuit decisions and the substantial evidence standard of review now applied to USPTO Board decisions, the following guidance is provided in order to assist the examiners in determining when it is appropriate to take official notice of facts without

supporting documentary evidence or to rely on common knowledge in the art in making a rejection, and if such official notice is taken, what evidence is necessary to support the examiner's conclusion of common knowledge in the art.

(1) Determine when it is appropriate to take official notice without documentary evidence to support the examiner's conclusion.

Official notice without documentary evidence to support an examiner's conclusion is permissible only in some circumstances. While "official notice" may be relied on, as noted in MPEP § 2144.03, these circumstances should be rare when an application is under final rejection or action under 37 CFR 1.113. Official notice unsupported by documentary evidence should only be taken by the examiner where the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known.<sup>4</sup> In appropriate circumstances, it might not be unreasonable to take official notice of the fact that it is desirable to make something faster, cheaper, better, or stronger without the specific support of documentary evidence. Furthermore, it might not be unreasonable for the examiner in a first Office action to take official notice of facts by asserting that certain limitations in a dependent claim are old and well known expedients in the art without the support of documentary evidence provided the facts so noticed are of notorious character and serve only to "fill in the gaps" which might exist in the evidentiary showing made by the examiner to support a particular ground of rejection.<sup>5</sup>

It would not be appropriate for the examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well known are not capable of instant and unquestionable demonstration as being well-known. For example, assertions of technical facts in the areas of esoteric technology or specific knowledge of the prior art must always be supported by citation to some reference work recognized as standard in the pertinent art.<sup>6</sup>

It is never appropriate to rely solely on "common knowledge" in the art without evidentiary support in the record, as the principal evidence upon which a rejection was based.<sup>7</sup> As the court held in *Zurko*, an assessment of basic knowledge and common sense that is not based on any evidence in the record lacks substantial evidence support.<sup>8</sup>

(2) If official notice is taken of a fact, unsupported by documentary evidence, the technical line of reasoning underlying a decision to take such notice must be clear and unmistakable.

Ordinarily, there must be some form of evidence in the record to support an assertion of common knowledge.<sup>9</sup> In certain older cases, official notice has been taken of a fact that is asserted to be "common knowledge" without specific reliance on documentary evidence where the fact noticed was readily verifiable, such as when other references of record supported the noticed fact, or where there

was nothing of record to contradict it.<sup>10</sup> If such notice is taken, the basis for such reasoning must be set forth explicitly. The examiner must provide specific factual findings predicated on sound technical and scientific reasoning to support his or her conclusion of common knowledge.<sup>11</sup> The applicant should be presented with the explicit basis on which the examiner regards the matter as subject to official notice and be allowed to challenge the assertion in the next reply after the Office action in which the common knowledge statement was made.

(3) If applicant challenges a factual assertion as not properly officially noticed or not properly based upon common knowledge, the examiner must support the finding with adequate evidence.

To adequately traverse such a finding, an applicant must specifically point out the supposed errors in the examiner's action, which would include stating why the noticed fact is not considered to be common knowledge or well-known in the art.<sup>12</sup> A general allegation that the claims define a patentable invention without any reference to the examiner's assertion of official notice would be inadequate. If applicant adequately traverses the examiner's assertion of official notice, the examiner must provide documentary evidence in the next Office action if the rejection is to be maintained.<sup>13</sup> If the examiner is relying on personal knowledge to support the finding of what is known in the art, the examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. See 37 CFR 1.104(d)(2).

If applicant does not traverse the examiner's assertion of official notice or applicant's traverse is not adequate, the examiner should clearly indicate in the next Office action that the common knowledge or well-known in the art statement is taken to be admitted prior art because applicant either failed to traverse the examiner's assertion of official notice or that the traverse was inadequate. If the traverse was inadequate, the examiner should include an explanation as to why it was inadequate.

(4) Determine whether the next Office action should be made final.

If the examiner adds a reference in the next Office action after applicant's rebuttal, and the newly cited reference is added only as directly corresponding evidence to support the prior common knowledge finding, and it does not result in a new issue or constitute a new ground of rejection, the Office action may be made final. If no amendments are made to the claims, the examiner must not rely on any other teachings in the reference if the rejection is made final. If the newly cited reference is added for reasons other than to support the prior common knowledge statement and a new ground of rejection is introduced by the examiner that is not necessitated by applicant's amendment of the claims, the rejection may not be made final. See MPEP § 706.07(a).

(5) Summary.

Any rejection based on assertions that a fact is well-known or is common knowledge in the art without documentary evidence to support the examiner's conclusion should be judiciously applied. Furthermore, as noted by the court in *Ahlert*, any facts so noticed should be of notorious character and serve only to "fill in the gaps" in an insubstantial manner which might exist in the evidentiary showing made by the examiner to support a particular ground for rejection. It is never appropriate to rely solely on common knowledge in the art without evidentiary support in the record as the principal evidence upon which a rejection was based.<sup>14</sup>

MPEP § 2144.03 will be revised accordingly in the upcoming revision to be consistent with this memo.

Cc: Nicholas Godici  
Esther Kepplinger  
Kay Kim  
David Lacey

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<sup>1</sup> The Supreme Court has described substantial evidence review in the following manner:

Substantial evidence is more than a mere scintilla. It means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion...Mere uncorroborated hearsay or rumor does not constitute substantial evidence.

*Consolidated Edison Co. v. NLRB*, 305 U.S. 197, 229-30 (1938)(quoted in *Gartside*, 203 F.3d at 1312, 53 USPQ2d at 1773). "'Substantial evidence' review involves examination of the record as a whole, taking into account evidence that both justifies and detracts from an agency's decision." *Gartside*, 203 F.3d at 1312, 53 USPQ2d at 1773 (citing *Universal Camera Corp. v. NLRB*, 340 U.S. 474, 487-88 (1951)). Furthermore, the Supreme Court has also recognized that "the possibility of drawing two inconsistent conclusions from the evidence does not prevent an administrative agency's finding from being supported by substantial evidence." *Consolo v. Federal Maritime Comm'n*, 383 U.S. 607, 620 (1966) (quoted in *Gartside*, 203 F.3d at 1312, 53 USPQ2d at 1773).

<sup>2</sup> See *Packard Press, Inc. v. Hewlett-Packard Co.*, 227 F.3d 1352, 1360, 56 USPQ2d 1351, 1356 (Fed. Cir. 2000) (questioning authority to take judicial notice for the first time on appeal in light of the APA standard of review established by *Dickinson v. Zurko*, 527 U.S. at 165, 50 USPQ2d at 1937). Although the substantial evidence standard is deferential to the agency's decision, it imposes certain evidentiary requirements that must be met by the agency in formulating a decision. The Federal Circuit explained that "[i]n appeals from the Board, we have before us a comprehensive record that contains the arguments and evidence presented by the parties, including all of the relevant information upon which the board relied in rendering its decision." *Gartside*, 203 F.3d at 1314, 53 USPQ2d at 1774. Furthermore, the record is "closed, in that the Board's decision must be justified within the four corners of that record." *Id.* Thus, the record before the USPTO "dictates the parameters of review" available to the court. *Id.* Accordingly, "the Board's opinion must explicate its factual conclusions, enabling [the court] to verify readily whether those conclusions are indeed supported by 'substantial evidence' contained within the record." *Id.* (citing *Gechter v. Davidson*, 116 F.3d 1454, 1460, 43 USPQ2d 1030, 1035 (Fed. Cir. 1997)).

<sup>3</sup> *Zurko*, 258 F.3d at 1385, 59 USPQ2d 1697 ("the Board cannot simply reach conclusion based on its own understanding or experience—or on its assessment of what would be basic knowledge or common sense. Rather, the Board must point to some concrete evidence in the record in support of these findings."). See also *In re Lee*, \_\_\_ F.3d \_\_\_, \_\_\_, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002) (The Board determined that it was not necessary to present a source of a teaching, suggestion, or motivation to combine the references

because the conclusion of obviousness may be made from common knowledge and common sense of a person of ordinary skill in the art. The court reversed the Board's decision in sustaining a rejection under 35 U.S.C. 103 and stated that "'common knowledge and common sense' on which the Board relied in rejecting Lee's application are not the specialized knowledge and expertise contemplated by the Administrative Procedure Act. Conclusory statements such as those here provided do not fulfill the agency's obligation... The board cannot rely on conclusory statements when dealing with particular combinations of prior art and specific claims, but must set forth the rationale on which it relies").

<sup>4</sup> As noted by the court in *In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970), the notice of facts beyond the record which may be taken by the examiner must be "capable of such instant and unquestionable demonstration as to defy dispute" (citing *In re Knapp Monarch Co.*, 296 F.2d 230, 132 USPQ 6 (CCPA 1961)). In *Ahlert*, the court held that the Board properly took judicial notice that "it is old to adjust intensity of a flame in accordance with the heat requirement." See also *In re Fox*, 471, F.2d 1405, 1407, 176 USPQ 340, 341 (CCPA 1973) (the court took "judicial notice of the fact that tape recorders commonly erase tape automatically when new 'audio information' is recorded on a tape which already has a recording on it").

<sup>5</sup> *Zurko*, 258 F.3d at 1385, 59 USPQ2d at 1697; *In re Ahlert*, 424 F.2d at 1092, 165 USPQ at 421.

<sup>6</sup> *In re Ahlert*, 424 F.2d at 1091, 165 USPQ at 420-21. See also *In re Grose*, 592 F.2d 1161, 1167-68, 201 USPQ 57, 63 (CCPA 1979) ("[w]hen the PTO seeks to rely upon a chemical theory, in establishing a prima facie case of obviousness, it must provide evidentiary support for the existence and meaning of that theory."); *In re Eynde*, 480 F.2d 1364, 1370, 178 USPQ 470, 474 (CCPA 1973) ("we reject the notion that judicial or administrative notice may be taken of the state of the art. The facts constituting the state of the art are normally subject to the possibility of rational disagreement among reasonable men and are not amenable to the taking of such notice.").

<sup>7</sup> *Zurko*, 258 F.3d at 1385, 59 USPQ2d at 1697. While the court explained that, "as an administrative tribunal the Board clearly has expertise in the subject matter over which it exercises jurisdiction," it made clear that such "expertise may provide sufficient support for conclusions [only] as to peripheral issue." *Id.* at 1385-86, 59 USPQ2d at 1697.

<sup>8</sup> *Zurko*, 258 F.3d at 1385, 59 USPQ2d at 1697. See also *In re Lee*, \_\_\_ F.3d at \_\_\_, 61 USPQ2d at 1435.

<sup>9</sup> See *In re Lee*, \_\_\_ F.3d at \_\_\_, 61 USPQ2d 1434-35; *In re Zurko*, 258 F.3d at 1386, 59 USPQ2d at 1697 (holding that general conclusions concerning what is "basic knowledge" or "common sense" to one of ordinary skill in the art without specific factual findings and some concrete evidence in the record to support these findings will not support an obviousness rejection).

<sup>10</sup> See *In re Soli*, 317 F.2d 941, 945-46, 137 USPQ 797, 800 (CCPA 1963) (the court accepted the examiner's assertion that the use of "a control is standard procedure throughout the entire field of bacteriology" because it was readily verifiable and disclosed in references of record not cited by the Office); *In re Chevenard*, 139 F.2d 711, 713, 60 USPQ 239, 241 (CCPA 1943) (accepting examiner's finding that a brief heating at a higher temperature was the equivalent of a longer heating at a lower temperature where there was nothing in the record to indicate the contrary and where the applicant never demanded that the examiner produce evidence to support his statement).

<sup>11</sup> See *Soli*, 317 F.2d at 946, 37 USPQ at 801; *Chevenard*, 139 F.2d at 713, 60 USPQ at 241.

<sup>12</sup> See 37 CFR 1.111(b). See also *Chevenard*, 139 F.2d at 713, 60 USPQ at 241 ("[I]n the absence of any demand by appellant for the examiner to produce authority for his statement, we will not consider this contention.").

<sup>13</sup> See 37 CFR 1.104(c)(2). See also *Zurko*, 258 F.3d at 1386, 59 USPQ2d at 1697 ("the Board [or examiner] must point to some concrete evidence in the record in support of these findings" to satisfy the substantial evidence test).

<sup>14</sup> See *Zurko*, 258 F.3d at 1386, 59 USPQ2d at 1697; *Ahlert*, 424 F.2d at 1092, 165 USPQ 421.